

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
Washington 25, D. C.

TECHNICAL STANDARDS COMMITTEES
Month of May 1950

The following is a summary of the changes in the "List of Materials Acceptable For Use on REA-Financed Systems" resulting from decisions of the Technical Standards Committees during the month of May 1950:

1. Page D r-2 - Clevis, secondary, deadend, insulated

Add Seyler double clevis number 0375.

2. Page D af-4 - Cutout, fuse, single-shot - Substation

Add General Electric number 6129026G10 to replace number 6129026G6.

3. Page D av - Conductors, service (weatherproof)

Add Kennecott triple-braid weatherproof conductor as follows:

<u>Manufacturer</u>	<u>MHD Copper Triple-braid (URC)</u>
Kennecott	"Kenline URC"

4. Page D av-1 - Conductors, bare (copperweld and copperweld-copper)
(These conductors shall be in accordance with ASTM Specs.
B228-48T and B229-48T, or latest revisions thereof.)

Enter copperweld and copperweld-copper bare conductors on new page "D av-1" as follows:

<u>Manufacturer</u>	<u>Sizes</u>
Copperweld Steel	2A, 4A, 6A, 8A, 8C, 8D, 9½D, 3#12

5. Page D bn - Clamp, loop deadend

Add Joslyn No. J1411 to replace No. J1412 for No. 4 ACSR.

6. Page D cg-1 - Switches, pole top, air-break, group-operated

Change General Electric listing to read as follows:

<u>Manufacturer</u>	<u>Types</u>	
	2-insulator	3-insulator
General Electric	RK	TA RF

2-Technical Standards Committees
Materials List Changes - Month of May 1950

7. Page D ga - Watthour Meters

Add watthour meters as shown on the attached sheets.

8. Page D gb - Meter Sockets

Add Westinghouse meter sockets as follows:

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u>
Westinghouse	S	-
	S-5	-
	S-6	-

9. Page D sb - Switches, disconnecting, hook operated

Add General Electric type FA.

10. Page D sc - Regulators, voltage

Add Westinghouse voltage regulators as follows:

<u>Manufacturer</u>	<u>Type</u>	<u>KVA Range</u>	<u>Description</u>
Westinghouse	URL-8	19.1 - 76.2	Single phase - step type
	URS-1	76.2 - 250	Single phase - step type
	URS-3	104 - 750	Three phase - step type

11. Page D xx - Service Control Equipment

Add Cutler-Hammer numbers as follows:

<u>Manufacturer</u>	<u>Description</u>	<u>Rating of fuse or breaker</u>	<u>Type or Catalog No.</u>	<u>Maximum Recommended Transformer Size</u>
Cutler-Hammer	Enclosure & breakers	1 - 35 amp.	4413H1	1½ kva
		2 - 35 amp.	4413H2	3 kva
		2 - 50 amp.	4413H3	5 kva

12. Page T af - Cutout, fuse, single-shot - Substation

Add General Electric number 6129026G10 to replace number 6129026G6.

3-Technical Standards Committees
Materials List Changes - Month of May 1950

13. Page T cg-1 - Switches, pole top, air-break, group-operated

Change General Electric listing to read as follows:

Manufacturer

Types

2-insulator 3-insulator

General Electric

RK

TA
RF

14. Pages T cg-1 and T cg-2 - Switches, pole top, air-break, group-operated

Add note at the bottom of these pages as follows:

NOTE: Group operated switches in the 34.5, 46, and 69 kv ratings are to be furnished with interphase shafts suitable for seven-foot spacing between phases.

15. Page T ct - Plate, double arming

Add Kortick number K1465 as a 4" x $\frac{1}{4}$ " x 17" double arming plate.

16. Page T sb - Switches, disconnecting, hook operated

Add General Electric type FA.

ga - Watthour Meters
(Single Phase)

<u>Manufacturer</u>	<u>Catalog No.</u>		<u>Catalog No.</u>	
	<u>Type</u>	<u>with cyclometer register</u>	<u>Type</u>	<u>with cyclometer register</u>
	<u>15 ampere, 2 wire, 120 volt</u>		<u>15 ampere, 3 wire, 240 volt</u>	
	(For loads not exceeding 45 amperes)		(For loads not exceeding 60 amperes)	
Duncan	MF-S	220 131	MF-S	221 231
	MF-A	210 131	MF-A	211 231
General Electric	I-30S*	428X8	I-30S*	428X9
	I-30A*	428X6	I-30A*	428X7
	I-50S	493X87	I-50S	493X88
	I-50A	493X91	I-50A	493X92
Sangamo	JS	Jobas**	JS	Jelos**
	JA	Janal**	JA	Jaboy**
Westinghouse	CS	1 101 698***	CS	1 101 704***
	CA	1 101 715***	CA	1 101 721***
		821 542		821 548
		876 649		876 661

* It is recommended that the I-50 series of meters be purchased in lieu of the I-30 series where the required ratings are available.

** Specify the type of register desired.

*** Identical cyclometer meters with REA insignia are available under different catalog numbers. These are also acceptable to REA where they correspond to the catalog numbers listed.

ga - Watthour Meters
(Single Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u> with cyclometer register	<u>Catalog No.</u> with clock register	
		<u>50 ampere, 3 wire, 240 volt</u> (The S type meters installed in standard sockets for loads not exceeding 100 amperes. The "A" type meters for loads not exceeding 150 amperes)		
Duncan	MF-S	221 251	22 125	
	MF-A	211 251	21 125	
General Electric	I-30S*	377X73	85X523	
	I-30A*	377X75	85X507	
Sangamo	JS	Jotis**	Jotis**	
	JA	Jated**	Jated**	
Westinghouse	CS	1 101 705***	821 549	
	CA	1 101 722	876 662	

<u>Type</u>	<u>Catalog No.</u> with cyclometer register	<u>Catalog No.</u> with clock register	
	<u>50 ampere EXTENDED RANGE, 3 wire, 240 volt</u> (When used with special heavy duty sockets for loads not exceeding 150 amperes)		
MFSE****	221 261	22 126	
MF-S	221 251	22 125	
I-30S	377X73	85X523	
JS****	Jotis**	Jotis**	
CS	1 107 705***	821 549	

* It is recommended that the I-50 series of meters be purchased in lieu of the I-30 series where the required ratings are available.

** Specify the type of register desired.

*** Identical cyclometer meters with REA insignia are available under different catalog numbers. These are also acceptable to REA where they correspond to the catalog numbers listed.

**** These meters may be used on loads not exceeding 200 amperes when heavy duty sockets having this current carrying capacity are used.

ga - Watthour Meters
(Single Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u> with cyclometer register		<u>Catalog No.</u> with cyclometer register	
		<u>2½ ampere, 2 wire, 120 volt*</u> (For use only with instrument transformers)		<u>2½ ampere, 2 wire, 240 volt*</u> (For use with 3 wire current transformer for 3 wire single phase service)	
Duncan	MF-ST	220 101	22 010	MF-ST	220 201 22 020
	MF-AT	210 101	21 010	MF-AT	210 201 21 020
General Electric	I-30S	(available on special order)		I-30S	(available on special order) 97XL08
	I-30A	(available on special order)		I-30A	(available on special order) 85X513
Sangamo	JS	Julis**	Julis**	JS	Jixes** Jixes**
	JA	Jarox**	Jarox**	JA	Japax** Japax**
Westinghouse	CS	1 542 944***	1 542 938	CS	1 542 946*** 1 542 940
	CA	1 542 945***	1 542 939	CA	1 542 947*** 1 542 941

* These socket type meters must be used with special sockets having circuit closing devices. The "A" base meters should be installed with meter test switches for proper protection of instrument transformers and safety to personnel.

** Specify the type of register desired.

*** Identical cyclometer meters with REA insignia are available under different catalog numbers. These are also acceptable to REA where they correspond to the catalog numbers listed.

ga - Watthour Meters
(Single Phase)

<u>Manufacturer</u>	<u>Type</u>	Catalog No. with cyclometer register	Catalog No. with clock register
		<u>2½ ampere, 3 wire, 240 volt*</u>	
		(For use with two two-wire current transformers on three wire single phase services)	
Duncan	MF-ST MF-AT	221 201 211 201	22 120 21 120
General Electric	I-30S I-30A	(not available) (available on special order)	(not available) 85X514
Sangamo	JS JA	Jemab** Jelab**	Jemab** Jelab**
Westinghouse	CS CA	1 542 948*** 1 542 949***	1 542 942 1 542 943

* These socket type meters must be used with special sockets having circuit closing devices.
The "A" base meters should be installed with meter test switches for proper protection of
instrument transformers and safety to personnel.

** Specify the type of register desired.

*** Identical cyclometer meters with REA insignia are available under different catalog numbers.
These are also acceptable to REA where they correspond to the catalog numbers listed.

ga - Watthour Meters
(Three Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u> with cyclometer register	<u>Catalog No.</u> with clock register
<u>15 Ampere, 3 wire NETWORK, 120 volt, 2 element</u> (For network, two phase wires and neutral from a four wire Y 120/208 volt circuit. For loads not exceeding 60 amperes).			
Duncan	MG-2S	*	32 215
	MG-2A	*	
General Electric	V-2S	*	85X747
	V-2A	*	
Sangamo	LC-2-S	*	Cajah
	LC-2-A	*	
Westinghouse	CS-5	*	931 423
	CA-5	*	

<u>50 Ampere, 3 wire NETWORK, 120 volt, 2 element</u> (For network, two phase wires and neutral from a four wire Y 120/208 volt circuit. For loads not exceeding 100 amperes on "S" base meters and 150 amperes on "A" base meters).			
	MG-2S	*	32 215
	MG-2A	*	
	V-2S	*	85X747
	V-2A**	*	
	LC-2-S	*	Cajah
	LC-2-A	*	
	CS-5	*	931 423
	CA-5	*	

* Check with the manufacturer regarding the availability of cyclometer registers.

** This meter should not be loaded beyond 125 amperes.

ga - Watthour Meters
(Three Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u>	
		with cyclometer register	Catalog No. with clock register
15 Ampere, 3 wire, 240 volt, 2 element (For 3 phase 3 wire delta or open delta circuits. For loads not exceeding 60 amperes).			
Duncan	MG-2S	*	32 223
	MG-2SP	*	32 323
	MG-2A	*	31 223
	MG-2P	*	33 323
General Electric	V-2-S	428X10	85X750
	V-3-S	428X12	97XL25
	V-2-A	*	85X730
	V-3-A	*	85X890
Sangamo	LC-2-S	*	Catus
	LC-2-SP	*	Cimny
	LC-2-A	*	Capac
	LC-2-P	*	Cegon
Westinghouse	CS-5	*	931 426
	CS-2	*	1 009 898
	CA-5	*	1 004 963
	CA-2	*	929 510

<u>Type</u>	<u>Catalog No.</u>	
	with cyclometer register	Catalog No. with clock register
50 Ampere, 3 wire, 240 volt, 2 element (For 3 phase 3 wire delta or open delta circuits. For loads not exceeding 100 amperes on "S" base meters and 150 amperes on "A" base meters).		
MG-2S	*	32 225
MG-2SP	*	32 325
MG-2A	*	31 225
MG-2P	*	33 325
V-2-S	428X11	85X752
	428X13	97XL26
	*	85X732
	*	85X892
LC-2-S	*	Catto
LC-2-SP	*	Cinde
LC-2-A	*	Capok
LC-2-P	*	Ceipo
CS-5	*	931 428
CS-2	*	1 009 900
CA-5	*	1 004 965
CA-2	*	929 512

50 Ampere, 3 wire, 240 volt, 2 element
(For 3 phase 3 wire delta or open delta circuits. For loads not exceeding 100 amperes on "S" base meters and 150 amperes on "A" base meters).

Duncan	MG-2S	*	32 225
	MG-2SP	*	32 325
	MG-2A	*	31 225
	MG-2P	*	33 325
General Electric	V-2-S	428X11	85X752
	V-3-S	428X13	97X126
	V-2-A	*	85X732
	V-3-A	*	85X892
Sangamo	LC-2-S	*	Catto
	LC-2-SP	*	Cinde
	LC-2-A	*	Capok
	LC-2-P	*	Ceipo
Westinghouse	CS-5	*	931 428
	CS-2	*	1 009 900
	CA-5	*	1 004 965
	CA-2	*	929 512

* Check with the manufacturer regarding the availability of cyclometer registers.

ga - Watthour Meters
(Three Phase)

<u>Manufacturer</u>	<u>Type</u>	Catalog No. with cyclometer register
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2½ Ampere, 3 wire, 120 volt, 2 element

(For use with current and potential transformers on
3 phase 3 wire delta, open delta, or "W" circuits.
May also be used with current transformers on
NETWORK 120/208 volt circuits).

Duncan	MG-2ST	*	32 310
	MG-2PT	*	33 310
General Electric	V-3-S	*	86X3
	V-3-A	*	85X907
Sangamo	LC-2-ST	*	Cinim
	LC-2-PT	*	Cepek
Westinghouse	CS-2	*	1 004 052
	CA-2	*	929 539

<u>Type</u>	Catalog No. with cyclometer register
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2½ Ampere, 3 wire, 240 volt, 2 element
(For use with current transformers on
240 volt, 3 phase 3 wire delta or
open delta circuits).

MG-2ST	*	32 320
	MG-2PT	*
V-3-S	*	85X999
	V-3-A	*
LC-2-ST	*	Cinol
	LC-2-PT	*
CS-2	*	1 004 055
	CA-2	*

* Check with the manufacturer regarding the availability of cyclometer registers.

ga - Watthour Meters
(Three Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u>	
		with cyclometer register	Catalog No. with clock register
<u>15 Ampere, 4 wire, 240 volt, 2 element</u> (For 3 phase 4 wire delta or open delta circuits. Combination of single phase lighting and three phase power load. For loads not exceeding 60 amperes).			
Duncan	MG-2S Delta	*	32 423
	MG-2P Delta	*	33 423
General Electric	V-6-S	428XL4	86X31
	V-6-A	*	85X960
Sangamo	LC-2-S Delta	*	Citur
	LC-2-P Delta	*	Cicam
Westinghouse	CS-7	*	1 004 017
	CA-7	*	1 055 333

<u>Type</u>	<u>Catalog No.</u>	
	with cyclometer register	Catalog No. with clock register
<u>50 Ampere, 4 wire, 240 volt, 2 element</u> (For 3 phase 4 wire delta or open delta circuits. Combination of single phase lighting and three phase power load. For loads not exceeding 100 amperes on "S" base meters and 150 amperes on "A" base meters).		
MG-2S Delta	*	32 425
	*	33 425
V-6-S	428XL5	86X33
	V-6-A	*
LC-2-S Delta	*	Civel
	LC-2-P Delta	*
CS-7	*	1 004 019
	CA-7	*

* Check with the manufacturer regarding the availability of cyclometer registers.

ga - Watthour Meters
(Three Phase)

2½ Ampere, 4 wire, 240 volt, 2 element
(For use with current transformers on 3 phase 4 wire delta or open delta circuits.)

Meters listed as: 2½ Ampere, 3 wire, 240 volt, 2 element (For use with current transformers on 240 volt 3 phase 3 wire delta or open delta circuits) may be used to meter 4 wire 3 phase delta or open delta loads if one two-wire and one three-wire current transformers of equal ratio are used.

Manufacturer	Type	Catalog No. with cyclometer register	Catalog No. with clock register
FOR USE WITH THREE 2-WIRE CURRENT TRANSFORMERS OF EQUAL RATIO**			
Duncan	MG-2P Delta T	*	33 420
General Electric	V-6-A	*	97X134
	V-7-A	*	86X429
Sangamo	LC-2-S Delta T	*	Civia
	LC-2-P Delta T	*	Cigna
	LC-3-P Delta T	*	Cully
Westinghouse	CS-7	*	1 063 680
	CS-9	*	1 057 607
	CA-7	*	1 055 341
	CA-9	*	1 055 393

* Check with the manufacturer regarding the availability of cyclometer registers.

** All socket type meters used with current transformers must be used with special sockets having circuit closing devices. The "A" base meters should be installed with meter test switches for proper protection of instrument transformers and safety to personnel.

ga - Watthour Meters
(Three Phase)

<u>Manufacturer</u>	<u>Type</u>	<u>Catalog No.</u>	
		with cyclometer register	Catalog No. with clock register
<u>2½ Ampere, 4 Wire, 120 volt, 2½ element</u> (For use with current and potential transformers on 3 phase 4 wire Y circuits where voltages are balanced within 1 percent).			
Duncan	MG-2½PT	*	33 510
	MG-2½ST	*	32 510
General Electric	V-5-S	*	86X28
	V-5-A	*	85X952
Sangamo	LC-2½-PT	*	Ceydo
	LC-2½-ST	*	Cited
Westinghouse	CS-8	*	1 063 691
	CA-8	*	1 055 373

<u>Type</u>	<u>Catalog No.</u>	
	with cyclometer register	Catalog No. with clock register
<u>2½ Ampere, 4 wire, 120 volt, 3 element</u> (For use with current and potential transformers on 3 phase 4 wire Y circuits where voltages are not balanced).		
MG-3PT	*	34 720
V-4-A	*	86X424
LC-3-PT	*	Codum
LC-3-ST	*	Codfa
CS-3	*	1 057 583
CA-3	*	1 055 319

* Check with the manufacturer regarding the availability of cyclometer registers.

